Introduction

EnSight supports stereo display on Silicon Graphics workstations using CrystalEyes™ stereo from StereoGraphics, Inc. This technology works by rapidly displaying alternating left and right eye views on the screen. An emitter (which sits on top of your display monitor) sends an infared signal to special glasses worn by the viewer(s). The glasses contain liquid crystal shutters that alternately open and close the left and right eye lenses in response to the signal from the emitter in sync with the monitor display. The update frequency is such that the viewer effectively fuses the left and right views into a single stereo image. There is some degradation in image quality due to the fact that stereo uses alternating scanlines of the monitor to store the left and right images. This results in half the vertical resolution of the original image. Horizontal resolution is unchanged.

Stereo is useful for viewing any type of visually complex geometry. It is especially helpful for visualizing amorphous objects such as animating particle traces, trace ribbons, or discrete particles. It has also been noted that management and customers are typically quite impressed by stereo display.

See the See Also section below for information on purchasing CrystalEyes equipment.

Basic Operation

In EnSight, stereo display is enabled by pressing the F12 key on your keyboard. Pressing the F12 key again will return to normal display. The stereo separation angle can be controlled by pressing the F10 and F11 keys. F10 decreases the angle and F11 increases the angle.

There are two stereo modes available: full screen and “stereo-in-a-window”. When the EnSight Client starts, it will check to see if stereo in a window is available. If it is, this will be the stereo mode unless the “`-no-quad-stereo`” flag is given as a command line option when starting EnSight (in which case full screen mode will be used).

Most Silicon Graphics machines are capable of running stereo-in-a-window, *however*, most machines must be reconfigured to permit this option. See the manual page for `setmon` (*i.e.* run the command “`man setmon`”). Further, some machines may require an additional command to be issued to enter and exit stereo-in-a-window mode. If this is the case, you may specify the commands in the files:

```
$HOME/.ensight6/stereo_on
$HOME/.ensight6/stereo_off
```

If you use a stereo mode that takes over the entire display, be sure to set up your mouse buttons so you continue to perform a range of transformation operations during stereo display. See **How To Customize Mouse Button Actions** for more information. You can also use the macro facility to assign an arbitrary series of commands to keyboard keys. You could, for example, assign keys to start, stop, and step through the frames of a flipbook animation. See **How To Define and Use Macros** for more information.

See Also

Most SGI hardware is “stereo ready” meaning that you need no additional hardware (other than glasses and the emitter). However, check with your local SGI technical representative to be sure. The O2, in particular is *not* stereo ready and additional hardware must be purchased.

In the U.S., CrystalEyes hardware (glasses and emitters) can be purchased through CEI. Contact Sales and Marketing for pricing and availability:

CEI, Inc.
919-481-4301
919-481-4306 FAX
ensight@ceintl.com

Outside the U.S., contact your local EnSight distributor.